Abstract of the Disclosure

A timing recovery loop includes a random walk filter counter for counting early, nominal and late arrivals of data transitions pulses of an input baseband signal waveform encoding a digital bit stream, and provides magnitude counts that are compared to a threshold value that when exceeded by the magnitude counts results in a delay adjustment of the generated adjusted timing pulses then remaining synchronized with the actual bit timing for maintaining bit timing lock. The adjusted timing pulses can then be used by a data detector for reliable data detection and reconstruction of the digital bit stream. The threshold value can be adaptively adjusted for reducing drop lock rates in the presence of changing channel environments.

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